WEST ISLES FEASIBILITY STUDY

A STUDY TO ASSESS THE FEASIBILITY OF
ESTABLISHING A NATIONAL MARINE PARK
IN THE WEST ISLES AREA OF
THE BAY OF FUNDY, NEW BRUNSWICK

TASK REPORT

Parks Canada Parcs Canada

Tourism New Brunswick Tourisme Nouveau-Brunswick

SUMMARY DOCUMENT

PROPOSED WEST ISLES NATIONAL MARINE PARK SOCIO-ECONOMIC IMPACT STUDY

PREPARED FOR:

Evaluation and Analysis Division
Socio-Economic Branch
Parks Canada

PREPARED BY:

The DPA Group Inc.

Fredericton, N.B.

May 1985

FOREWORD

The West Isles Feasibility Study was initiated by the federal Minister of the Environment responsible for Parks Canada and the New Brunswick Minister of Tourism in November, 1983. The purpose of the study is to assess the feasibility of establishing a national marine park in the West Isles area of the Bay of Fundy.

The West Isles Feasibility Study is being conducted in three phases. Phase I is an assessment of the technical feasibility of establishing a national marine park in the West Isles area, from the perspective of Parks Canada and Tourism New Brunswick. If Ministers decide to proceed with the study, Phase II would involve extensive public consultation to provide the local public with the opportunity to become directly involved in the process to decide whether or not the West Isles proposal is feasible. The purpose of Phase III would be to analyse the results of the two preceeding phases, and to prepare a final report based on the findings, with recommendations for a future course of action.

In the process of completing Phase I, nine individual studies were conducted to investigate specific aspects of the feasibility assessment, all of which are summarized in the Phase I report. These nine studies include the following:

1. Recommended Resource Management Guidelines
2. Institutional and Administrative Arrangements
3. Optional Visitor Use Concepts
4. Transportation Analysis
5. Tourism Development Plan
6. Socio-Economic Impact Study
7. Historical/Archaeological Concerns and Opportunities
8. Land Ownership Inventory
9. Analysis and Summary of Public Comments

Copies of the above reports are available upon request from the following addresses:

Department of Tourism,
Recreation and Heritage*
P.O. Box 12345
Fredericton, New Brunswick
E3B 5C3
Phone: (506) 453-2624

Parks Canada
10 Wellington Street
Hull, Quebec
K1A 1G1
Phone: (819) 994-2696

* Throughout this report the former title Tourism New Brunswick has been used. The correct title is now the Department of Tourism, Recreation and Heritage.

1.0 INTRODUCTION

This summary briefly describes the socio-economic impacts which could result from the construction and operation of a proposed national marine park and associated facilities, in Charlotte County, Province of New Brunswick.

Five impact categories have been identified for investigation:

- economic impacts;
- demographic and social impacts;
- land-use impacts;
- impacts on local governments; and
- impacts at the community level.

The approach to the analysis of impacts reflects the stability of the affected regions. Few changes are expected to occur in the present socio-economic environment as the result of other economic developments. Consequently, only selected projections of future conditions are made, and then only where significant impacts can be expected.

Impacts are defined as significant positive or negative effects of the proposed park that will affect the quality of life of the residents. While most regions of New Brunswick will experience, directly or indirectly, economic effects of the proposed national marine park, most social effects will be restricted to the immediate West Isles region.

Four impact regions have been identified: the Province of New Brunswick, Charlotte County, West Isles and Campobello Island, and the town of St. Andrews. These impact regions define the broad areas in which the majority of both the direct and indirect effects will occur. A comparison of the features of the impact regions is presented in Exhibit 1-1.

EXHIBIT 1-1: OVERVIEW OF IMPACT REGIONS

	Size		Population		Employment	
	Km^2	% of Prov	No.	% of Total	No.	% of Total
Charlotte	3,360	4.7	26,571	3.8	10,095	3.9
West Isles	38	0.05	868	0.1	185	0.1
Campobello Island	39	0.05	1,424	0.2	255	0.1
St. Andrews	--	--	1,760	0.3	895	0.3
Province	71,569	100.0	696,403	100.0	260,990	100.0

Source: 1981 Census of Canada

2.0 IMPACT REGION PROFILES

2.1 Charlotte County

The Charlotte County impact region is located in the southwest part of the province adjacent to the State of Maine. The grouping of Islands known as the Fundy Isles (Grand Manan, Deer Island and Campobello Island) are also part of the County.

Various socio-economic indicators are presented in Exhibit 2-1. Population growth has been less than 1% per annum over the 1971 - 1981 period. The number of occupied dwellings increased by approximately 25 percent compared with a provincial growth rate of approximately 36 percent. The difference is accounted for by lower rates of household formation. The increase in Charlotte County is partially attributable to the influx of population related to the construction and operation of the Lepreau I nuclear generating station.

In 1981, the labour force of Charlotte County was 11,660, an increase of 2.3% over 1971 levels, and comparable with the provincial growth rate of 2.8%. This difference is due to slower growth in the working age population, and a smaller increase in participation rates. Both of these factors are influenced by a relatively lower level of economic opportunities. Low population growth rates result from an outmigration of families seeking better employment opportunities. Lower participation rates reflect the limited number of opportunities which cause workers to leave the workforce.

Charlotte County has a significantly greater portion of its labour force engaged in manufacturing than occurs in New Brunswick as a whole (25.6 percent compared to 16.7

percent). Primary industries, including agriculture, forestry, fishing and trapping, and mining are also slightly more important in Charlotte County than in the province as a whole. The county labour force distribution in other industrial sectors is slightly smaller than the province.

Average family incomes in Charlotte County were 98.4% of the New Brunswick average. Income for males was 93.7% of the provincial level, and females 86.8% of the New Brunswick average. Median incomes were also lower in the county than in the province.

Services and Amenities

The county is well served by an efficient road network which links the coastal communities with major urban centres.

Police protection is provided by municipal forces in many municipalities; the rest of the county is the jurisdiction of the RCMP.

All municipalities have permanent and/or volunteer fire brigades.

School enrollment in the county has been declining steadily since 1977. Department of Education enrollment projections indicate continued decline into the 1990's.

A wide range of government and municipal services related to health care, recreation, etc, is available in most communities.

EXHIBIT 2-1: CHARLOTTE COUNTY IMPACT REGION SELECTED SOCIO-ECONOMIC INDICATORS

	YEAR		
Indicator	1971	1976	1981
Population	24,550	25,425	26,571
Occupied Dwellings	7,055	7,930	8,825
Labour Force	9,325	9,865	11,660
Participation Rate	52.6%	53.2%	58.3%
Unemployment Rate	9.3%	10.5%	13.4%
Average Family Income			$20,822 ($1980)

Source: Statistics Canada, 1971, 1976 and 1981 Census

2.2 Campobello/West Isles Impact Region

Deer Island (West Isles) and Campobello Island are located in the western extremity of the Bay of Fundy and are expected to be the primary location for the proposed marine park.

The population of Campobello has been increasing over the 1971-1981 period, while that of Deer Island has declined slightly. The number of private dwellings on West Isles has increased by 4.5% over the period. A more substantial increase (17.1%) occurred on Campobello.

Total labour force has increased during the 1971-1981 period by 25.9% and 74.2% for West Isles and Campobello respectively. Campobello's growth is accounted for by substantial increases in the primary, manufacturing and service industries due to increased activity in fisheries (primary and processing) and tourism. Major growth sectors on West Isles were manufacturing and transportation.

Labour participation rates are approximately 2 and 9 percentage points lower than the provincial average for Campobello and the West Isles respectively. Unemployment rates are extremely high and consistently in excess of twice the provincial rate. West Isles and Campobello average family income is 16.3% and 11.7% respectively below that of Charlotte County.

For the most part, government services are adequate with two notable exceptions: neither island has a resident physician, and Deer Island children must be bussed to the mainland to attend school.

Commercial Fishing

Campobello and West Isles lie in Fisheries District 51 which is characterized by a successful, growing and active fishery as indicated by the following:

- over the 1976-1982 period, the number of total licensed fishermen has increased by 35.0%;
- between 1980 and 1982 the number of inshore and offshore boats has remained essentially stable; and
- over the 1976 - 1982 period, the volume of landings has more than doubled; the value of landings over the same period also exhibits a substantial increase from $1.2M ($1978) to $3.6M ($1982).

EXHIBIT 2-2: CAMPOBELLO/WEST ISLES IMPACT REGION SELECTED SOCIO-ECONOMIC INDICATORS

Indicators	YEAR 1971	1976	1981
Population			
Campobello	1,270	1,327	1,424
West Isles	975	896	868
Occupied Dwellings			
Campobello	380	420	445
West Isles	330	325	345
Labour Force			
Campobello	330		575
West Isles	270		340
Participation Rates			
Campobello	49.1%	56.4%	56.5%
West Isles	49.8%	47.7%	48.7%
Unemployment Rates			
Campobello	28.6%	27.3%	32.6%
West Isles	27.5%	26.9%	27.6%
Average Family Income			
Campobello			$18,384 ($1980)
West Isles			$17,418 ($1980)

Source: Statistics Canada, 1971, 1976 and 1981 Census

2.3 St. Andrews

The town population has fluctuated over the past decade but increased slightly over the 1976-1981 period. The population is aging dramatically (75% increase in 65+ age group between 1971 - 1981) reflecting its attraction as a retirement community.

The division of the labour force by industry shows that the service sector dominates the town's economy. This is to be expected since St. Andrews is a major tourism destination area in the province. The service sector increased from 195 employees in 1971 to 455 persons in 1981. Other notable changes have occurred in the manufacturing and public administration sectors (decreases of 70.6% and 33.3% respectively).

Family incomes (average $26,576 in 1980) are in the order of $6,000 higher than the county average. In large measure, these high income levels are explained by the presence of professional staff at the St. Andrews Biological Research Station and the Huntsman Marine Laboratory.

The participation rate in the town decreased between 1971 (48.4%) and 1981 (39.0%) probably due to the extreme aging of the population and persons moving into the retirement age group. The unemployment rate has increased from 2.2% in 1971 to 7.8% in 1981, but is still substantially lower than the county rate of 13.4% in 1981.

EXHIBIT 2-3: ST. ANDREWS IMPACT REGION SELECTED SOCIO-ECONOMIC INDICATORS

Indicator	YEAR 1971	1976	1981
Population	1,810	1,711	1,760
Occupied Dwellings	580	600	685
Labour Force	695	725	895
Participation Rate	48.4%	53.3%	39.0%
Unemployment Rate	2.2%	6.9%	7.8%
Average Family Income			$26,576 ($1980)

Source: Statistics Canada, 1971, 1976 and 1981 Census

3.0 TOURISM INFRASTRUCTURE

Tourism facilities in Charlotte County and the impact regions are shown below. It is evident that the West Isles and Campobello areas are underdeveloped with respect to the remainder of the county.

EXHIBIT 3-1: TOURISM FACILITIES, IMPACT REGIONS, 1984

Area	Motel/Hotel		Campgrounds		Tourist Homes	Restaurants
	#	Rooms*	#	Sites		
St. Andrews	11	370	3	268	1	10
West Isles	2	13	1	60		1
Campobello	4	31	2	98	1	3
Other County	9	230	3	118	3	16
TOTAL	26	644	9	544	5	30

Source: Tourism New Brunswick

* Peak Season

Historic tourist visitation (parties) to the area is shown in Exhibit 3-2.

EXHIBIT 3-2: TOURIST VISITATION (PARTIES), IMPACT REGIONS

	YEAR (May-October)		
	1974	1977	1980
Charlotte County			
Non-residents	147,800	203,300	134,800
Residents			34,200
Deer Island			
Non-residents	4,359	7,186	5,199
Residents			1,300
Campobello			
Non-residents	36,165	44,957	31,971
Residents			8,000

Source: Tourism New Brunswick, Auto Exit Surveys 1974, 1977, 1980

Tourism in the county is characterized by the following:

- the major mode of transportation is the automobile;
- the dominant market area is the United States, accounting for 52.4% of all non-resident parties in 1980;

- the peak season months-July and August - account for 63.5% of total May to October visitation;
- the primary reason for visit is "sightseeing";
- commercial accommodation occupancy rates have declined steadily since 1980 to an overall average of 47% and 42% in 1983 for Charlotte County and Campobello/West Isles respectively;
- campground occupancy rates are very low in the area: 27% for the county and 31% for Campobello/West Isles; and
- the total value of tourism in the county was $11.9 million in 1980, primarily accounted for by expenditures on accommodation, transportation and food.

4.0 DEVELOPMENT OPTIONS

This section briefly describes three development options for the proposed National Marine Park. Maps of the options appear at the end of the report.

OPTION 1

The most distinguishing feature of Option 1, is the location of the park's Visitor Reception Centre (VRC) and Administration complex on Green Point. The VRC would act as the central focus of most park activities. The vast majority of park visitors would arrive at the VRC before visiting any other portion of the park, and would embark on boat tours or take a shuttle boat service to facilities on the offshore islands. In addition to parking and picnicking facilities, the VRC itself would contain an underwater observatory, a viewpoint, and an interpretive display to introduce the visitor to the marine environment and to promote a broad understanding of marine ecology and processes, and the intricate relationship between man and the sea. The VRC would inform the visitor of the range of opportunities available in the marine park and of the regulations applying to those activities.

A dive centre would also be located in the VRC where all recreational divers would be required to register before embarking on a diving excursion in the park. The times and locations for these dives would be regulated from this location. In this option, all boat tours and shuttle boats would embark from a park wharf built in Kelly's Cove.

Also included in the VRC would be the nerve centre for all park administrative functions and the offices of the park warden service as well as for other government agencies such as Transport Canada and the Department of Fisheries and Oceans who would be assisting Parks Canada in the management of the park.

Other park facilities would be located on some of the small offshore islands. Day use and primitive campsites would be provided on Casco Bay, Sandy, and Parker Islands with access provided by a regular shuttle boat service. Boat mooring sites would be provided at designated locations for the use of park visitors arriving in their private craft. Tour boats would take visitors through the archipelago, past the East Quoddy Head lighthouse and out to White Horse Island to view the bird colonies. Areas designated for scuba diving include waters in the vicinity of Barnes and Adams Islands, White, Spruce and Sandy Islands, and Casco Bay Island south to Popes Island.

THIS OPTION INVOLVES NO PARK DEVELOPMENT ON DEER AND CAMPOBELLO ISLANDS.

OPTION 2

This option is characterized by a decentralization of park facilities and services. In contrast to Option 1, park development on Green Point would consist of a smaller visitor activity area providing facilities for parking and picnicking with a viewpoint and interpretive displays. In this option, the main VRC and the park Administration complex would be located on the northern tip of Deer Island. The VRC would perform the same functions as outlined above for Option 1, but would not include a marine observatory. A park wharf would also be provided at this location to accommodate the tour boats and the offshore island shuttle service.

A second facility, similar to that provided on Green Point, would be located on Deer Island Point. In conjunction with the private campground development currently on the point, this facility would provide additional parking and picnic

sites with a viewpoint and interpretive displays concentrating on the Old Sow Whirlpool.

Offshore island opportunities also include day use and primitive camping, but in this option are located on Adams, Simpson, Spruce and Casco Bay Islands. The areas designated for scuba diving are the same as those in Option 1. Optional tour boat routes are illustrated on the map and extend further south to include a pass by Indian Island to view and interpret the Chaffey Estate and its historical significance to the area.

In recognition of the many visitors travelling to Campobello Island each year, primarily to visit the Roosevelt Estate, this option provides for two visitor activity areas on Campobello Island in the vicinity of Wilsons Beach and the East Quoddy Head lighthouse. The former would be a major visitor activity area, essentially duplicating the services offered at the VRC on Deer Island. The visitor activity area at East Quoddy Head would be similar to that provided at Green Point and would take particular advantage of the lighthouse complex and its high interpretive potential, the excellent views of the marine park area, and the best land-based location in the area for watching whales and other marine mammals and birds.

THIS OPTION INVOLVES DEVELOPMENT ON ALL THREE LOCATIONS OF GREEN POINT, DEER ISLAND AND CAMPOBELLO ISLAND.

OPTION 3

The principal feature distinguishing Option 3 from the other two options is the location of the VRC in the town of St. Andrews, as illustrated on the map. Since the VRC represents the central focus of visitor activity, the majority of park visitors would travel to St. Andrews first before proceeding

by boat to the marine park area. This option takes maximum advantage of the tourism infrastructure, particularly access and restaurant and accommodation services, that already exists in St. Andrews.

The VRC complex in St. Andrews would be essentially the same as those mentioned above in the previous options, with the exception that the dive centre, the park administration offices and the base for the shuttle boat service would be located near Wilson's Beach on Campobello Island. It is essential for these services to be located in close proximity to the park itself. As with the other two options, the tour boats would operate from the VRC; in this case, from St. Andrews. They would follow a route such as that shown on the map which, while considerably longer, would take a similar route as in the other options through the marine park area.

This option also provides for the same visitor use opportunities on and among the offshore islands as described in the other two options.

Campobello Island also figures prominently in this option in much the same way as it does in Option 2, with visitor activity areas provided in the vicinity of Wilsons Beach and on East Quoddy Head.

THIS OPTION INVOLVES NO PARK DEVELOPMENT ON GREEN POINT OR ON DEER ISLAND.

5.0 VISITOR USE FORECASTS

This section presents the visitation forecasts to the proposed Marine Park. The results are expressed in terms of the number of visitors by location for each of the three proposed development options.

The forecasts were developed assuming the ferry system capacity for the West Isles and Campobello would remain at 1984 levels for the next ten years. Unforseen future development initiatives by private or public sectors which may affect park visitation levels in a positive or negative manner are obviously also not taken into account in the forecasts. Examples of these types of initiatives would be new tourist accommodations, and the proposed Ozark development on Campobello Island.

The number of estimated total visitors, by location, for each option, for years 1, 5 and 10 of park development, are shown in Exhibit 5-1.

Option I

This option involves development concentrated primarily on Green Point, Parker Island and the smaller islands in the Quoddy River and Head Harbour Passage. There is no development located on Campobello Island or Deer Island. There is a small primitive campground on Parker Island.

Consequently, under this option, the existence of the park is not expected to cause significant increased visitation to Campobello Island or Deer Island. The forecasts reflect therefore, expected visitation to Green Point.

EXHIBIT 5-1: VISITOR FORECASTS - PROPOSED WEST ISLES NATIONAL MARINE PARK

	DEVELOPMENT OPTION								
	I Year			II Year			III Year		
Location	1	5	10	1	5	10	1	5	10
Green Point	20,600	28,200	51,000	--	--	--	--	--	--
Campobello	--	--	--	17,900	39,900	98,100	17,900	39,900	98,100
West Isles	--	--	--	20,200	20,200	20,200	--	--	--
St. Andrews	--	--	--	--	--	--	200	200	43,200
TOTAL	20,600	28,200	51,000	38,100	60,100	118,300	18,100	40,100	141,300

Option II

The majority of the development involved in this option is located at Butler Point and near Stuart Town on Deer Island, on islands within the West Isles archipelego, and at Wilsons Point and East Quoddy Head on Campobello.

Under this option, it is considered that visitors to the park will come from two sources: 1) by capturing a share of those visitors already coming to the Roosevelt Estate; and 2) by capturing a share of the total resident and non-resident visitors to Charlotte County.

Option III

This option involves development on Campobello Island and within the Town of St. Andrews. The Campobello Island development in Option III is similar to Option II in type and location of facilities as well as phasing of capital investment. Thus the Campobello forecast for Option II is applicable to Option III.

The construction of a major visitor centre and tour boat linkages in St. Andrews is planned to begin in Year 5 of park development for the visitor centre and Year 6 for the boat linkages. These facilities will not be fully operational however until Year 7. Hence, it is only in Year 7 that the St. Andrews portion of the park will begin to attract a significant number of visitors.

6.0 ECONOMIC IMPACTS

The construction and operation of the proposed national marine park will have an economic impact on all four impact regions resulting from the following activities:

- capital expenditures during the development of the park;
- park salaries and wages;
- operation and maintenance expenditures related to the operation of the park; and
- purchases by tourists who visit the park.

These impacts can be divided into two types: direct and indirect. The direct impacts are those impacts which are directly associated with the park itself. Indirect impacts are those which occur as some of the direct income is respent in the local economy.

Each impact region will experience different economic impacts, because of their different abilities to "capture" spinoff effects from park operations.

Option 1 capital expenditures are estimated at $13.9 million ($1984) resulting in the creation of about 146 construction jobs over a ten year period. By year 10, the annual park operation and maintenance expenditure will be an estimated $1.2 million ($1984) and involve about 26 full time equivalent jobs. Expenditures on construction materials in Charlotte County will amount to nearly $3.7 million during the park's 10 year development period. Wages and salaries to operate and maintain the park are estimated at being over $580,000 by the tenth year of operation. Charlotte County residents would be expected to fill about 70% of the park operating and maintenance jobs. Tourist expenditures attributable to the park are estimated at over $810,000 by

year 10 in Charlotte County. Total full time equivalent jobs when considering all direct and indirect capital, operation, maintenance and tourist expenditures will range from about 12 in year 1 of the park to nearly 60 by the tenth year of operation in Charlotte County. Gross salaries and wages (both direct and indirect) will range from $215.9 million to $884.7 million in year 1 and 10 respectively in Charlotte County.

Option 2 capital expenditures are estimated at $15.1 million ($1984) resulting in the creation of about 164 construction jobs over a ten year period. By year 10, the annual park operation and maintenance expenditure will be an estimated $1.3 million ($1984) and involve about 31 full time equivalent jobs. Expenditures on construction materials in Charlotte County will amount to over $3.9 million during the park's 10 year development period. Wages and salaries to operate and maintain the park are estimated at being over $688,000 by the tenth year of operation. Charlotte County residents would be expected to fill about 70% of the park operating and maintenance jobs. Tourist expenditures attributable to the park are estimated at over $569,000 by year 10 in Charlotte County. Total full time equivalent jobs when considering all direct and indirect capital, operation, maintenance and tourist expenditures will range from about 12 in year 1 of the park to nearly 62 by the tenth year of operation in Charlotte County. Gross salaries and wages (both direct and indirect) will range from $216.0 million to $939.6 million in year 1 and 10 respectively in Charlotte County.

Option 3 capital expenditures are estimated at $14.4 million ($1984) resulting in the creation of about 147 construction jobs over a ten year period. By year 10, the annual park operation and maintenance expenditure will be an estimated $.76 million ($1984) and involve about 26 full time

equivalent jobs. Expenditures on construction materials in Charlotte County will amount to nearly $3.9 million during the park's 10 year development period. Wages and salaries to operate and maintain the park are estimated at being over $580,000 by the tenth year of operation. Charlotte County residents would be expected to fill about 70% of the park operating and maintenance jobs. Tourist expenditures attributable to the park are estimated at over $831,000 by year 10 in Charlotte County. Total full time equivalent jobs when considering all direct and indirect capital, operation, maintenance and tourist expenditures will range from about 12 in year 1 of the park to nearly 61 by the tenth year of operation in Charlotte County. Gross salaries and wages (both direct and indirect) will range from $216.0 million to $962.5 million in year 1 and 10 respectively in Charlotte County.

DEVELOPMENT OPTIONS

	I	II	III
1. Capital Expenditures Over Ten years	$13.9 M	$15.1 M	$14.4 M
2. Operation & Maintenance Expenditures in Year 10	$1.2 M	$1.3 M	$.76 M
3. Park Operation full-time Equivalent jobs in year 10	26.01	31.07	26.01
4. Park Operation Jobs Estimated to be filled by Charlotte County Residents in Year 10	19.01	23.07	19.01
5. Park Construction Jobs created over Ten Year Period	146	164	147
6. % Construction Jobs Estimated to be Available to Charlotte County Residents	100%	100%	100%
7. Tourist Expenditures Estimated to be Attributable to the Park by 10th Year	$810 K	$569 K	$831 K
8. Total Estimated Direct & Indirect Full Time Equivalent Jobs in Year 10			
- Province	74.5	75.6	73.8
- County	59.6	61.6	60.4

7.0 COMMUNITY IMPACTS

The changes in the social environment attributable directly or indirectly to the proposed park and which will, or may, affect the quality of life of the residents of the area will be primarily restricted to the immediate vicinity of the park. These changes are expected to be minimal.

During the construction phase, the range of predicted social effects is largely predicated upon the degree to which the project will generate requirements for imported labour. In consideration of existing unemployment rates (70 - 80%) prevalent among the trades likely to be required for the proposed park, coupled with currently predictable employment prospects for the future, it is estimated that almost the entire work force is likely to be Charlotte County residents. Mainland workers will likely commute to the islands on a daily basis.

Consequently, for Options II and III, increased congestion on the Deer Island ferry is likely but only during the early morning and late evening in year 2-4 of park development. The probability of occurrence of effects normally associated with an influx of migrant workers into small communities (i.e. population increases, housing demands, municipal and government services demands and corresponding changes in land use) is very low.

Once the proposed park has begun operations, community lifestyle may be affected by the expected increased levels of visitors to Deer Island in off-peak periods and Campobello Island year round.

In absolute terms, direct land use impacts on the mainland are negligible for all options. Discounting the use of uninhabited islands, there will be no Deer Island or Campobello Island land utilized in Option I. Less than 1%

of the total land mass of both islands will be utilized in Option III. These figures represent the most intense level of land use.

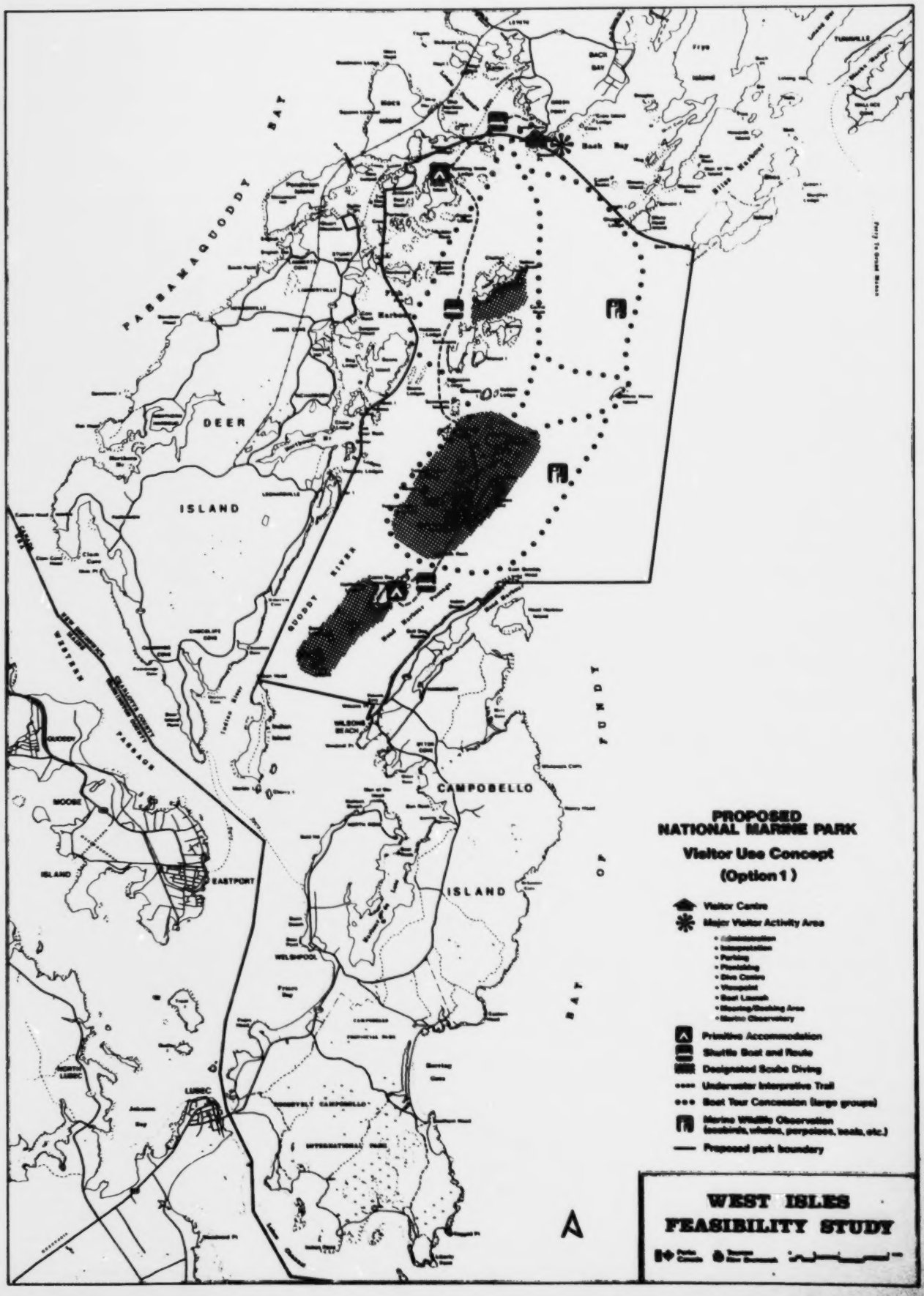
Temporary disruptions, as a result of construction activity associated with park development, will be minor since implementation will be phased over ten years. There would be an increase in trucking activity and vehicular traffic on the roads and ferry service during the construction period due to workmen travelling to and from the construction sites. This type of activity is traditionally a normal and acceptable part of development operations, no different than if a fish plant were to be constructed, fish produce trucked to market, or lumber transported to the area for housing construction. In addition, other types of temporary disruption to community services, such as telephone service, fire protection service, electrical power service, or other services, are not foreseen as a result of proposed park activities. If anything, the park-related developments will have positive effects on the overall availability and level of services. This has been the case in other national parks where the nearby and adjacent communities benefit from improved services.

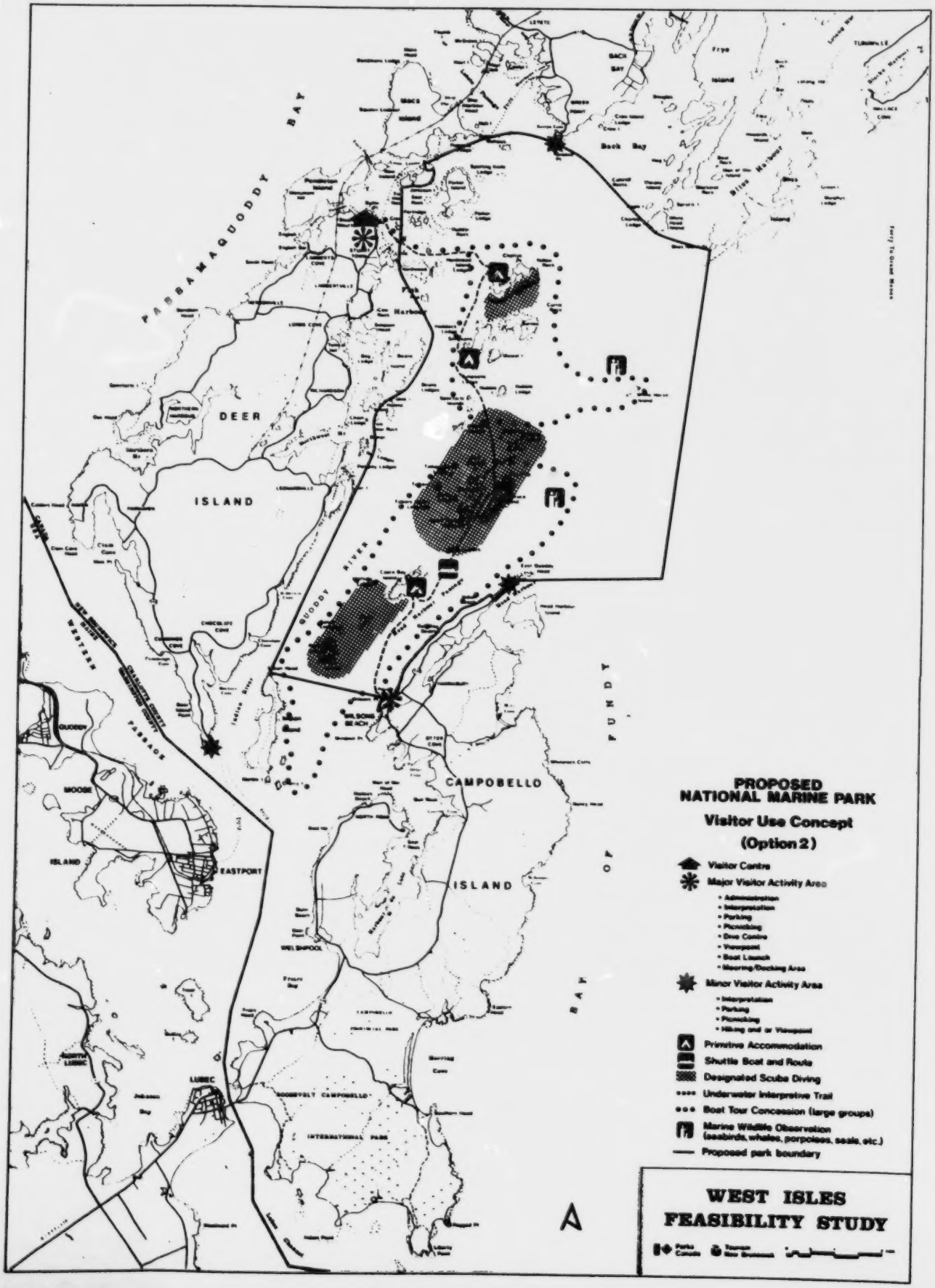
The effect of the park on existing commercial fishing activities is extremely difficult to quantify. However, several areas of potential conflict are possible:

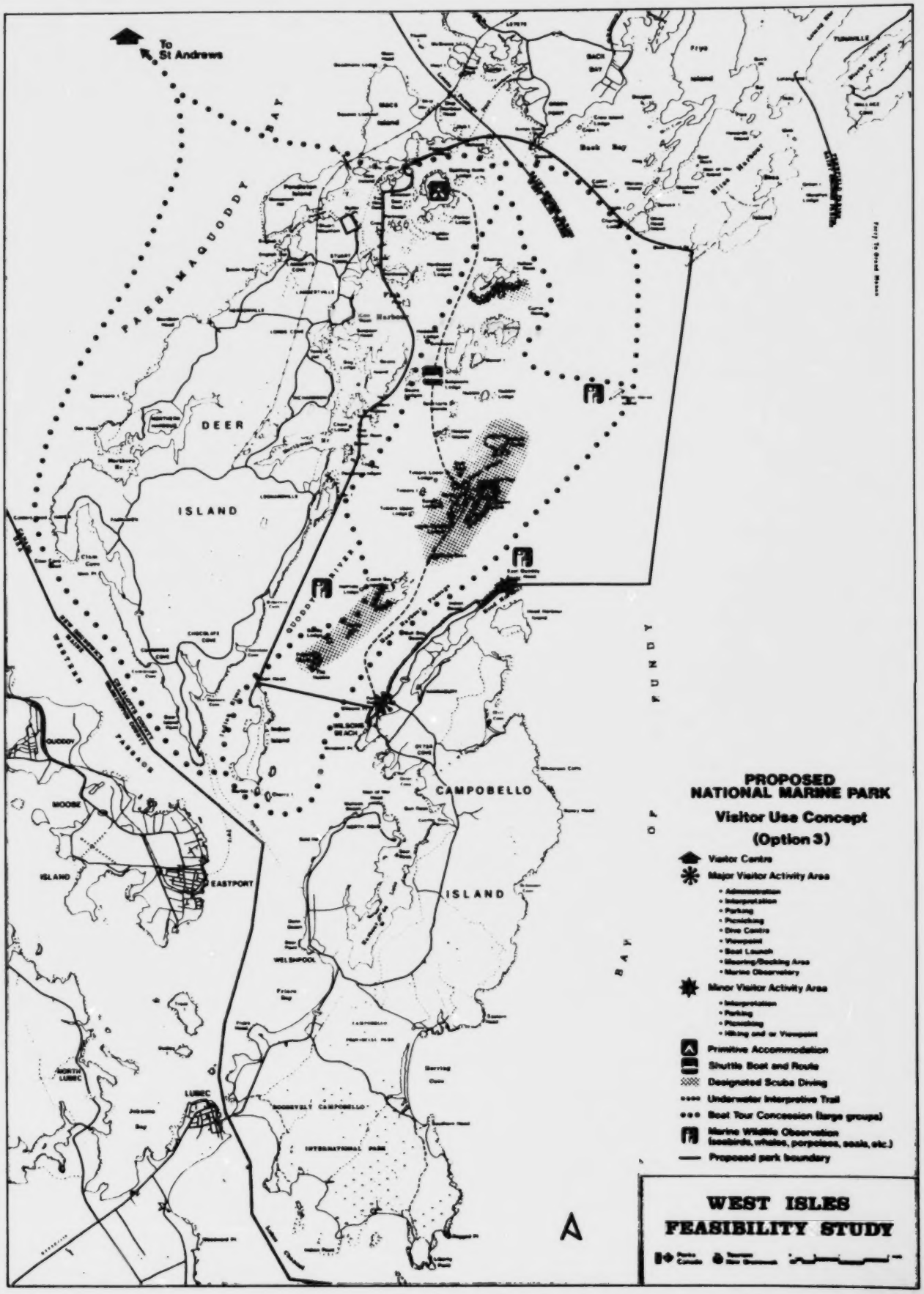
- the use of pleasure craft, tour boats and diving tenders may interfere with the operations of the fishing fleet;
- illegal resource harvesting by divers is to be expected (e.g. spear fishing, shellfish scavenging, etc.), even though these activities will be strictly prohibited;

- congestion on wharfs, resulting from curious tourists, may interfere with equipment storage and materials handling;
- congestion on roads may interfere with fish trucking operations; and
- with more strangers circulating in the area there will be increased risk of theft of equipment, both from wharfs and from the water.

The likelihood of occurrence of the above effects appears to be remote in the light of the proposed resource management guidelines and regulations as well as the use of patrol boats.


PASSAMAQUODDY BAY
DEER ISLAND
QUODDY RIVERS
CAMPOBELLO ISLAND
BAY OF FUNDY
EASTPORT
LUBEC
PROPOSED
NATIONAL MARINE PARK
Visitor Use Concept
(Option 1)
Visitor Centre
Major Visitor Activity Area
Primitive Accommodation
Shuttle Boat and Route
Designated Scuba Diving
Underwater Interpretive Trail
Boat Tour Concession (large groups)
Marine Wildlife Observation
(seabirds, whales, porpoises, seals, etc.)
Proposed park boundary
WEST ISLES
FEASIBILITY STUDY


PASSAMAQUODDY BAY
DEER ISLAND
QUODDY RIVER
CAMPOBELLO ISLAND
BAY OF FUNDY
EASTPORT
LUBEC
WELSHPOOL
PROPOSED
NATIONAL MARINE PARK
Visitor Use Concept
(Option 2)
Visitor Centre
Major Visitor Activity Area
• Administration
• Interpretation
• Parking
• Picnicking
• Dive Centre
• Viewpoint
• Boat Launch
• Mooring/Docking Area
Minor Visitor Activity Area
• Interpretation
• Parking
• Picnicking
• Hiking and or Viewpoint
Primitive Accommodation
Shuttle Boat and Route
Designated Scuba Diving
Underwater Interpretive Trail
Boat Tour Concession (large groups)
Marine Wildlife Observation
(seabirds, whales, porpoises, seals, etc.)
Proposed park boundary
WEST ISLES
FEASIBILITY STUDY


To St Andrews
PASSAMAQUODDY BAY
DEER ISLAND
CAMPOBELLO ISLAND
EASTPORT
LUBEC
WELSHPOOL
BAY OF FUNDY
PROPOSED NATIONAL MARINE PARK
Visitor Use Concept
(Option 3)
Visitor Centre
Major Visitor Activity Area
Minor Visitor Activity Area
Primitive Accommodation
Shuttle Boat and Route
Designated Scuba Diving
Underwater Interpretive Trail
Boat Tour Concession (large groups)
Marine Wildlife Observation (seabirds, whales, porpoises, seals, etc.)
Proposed park boundary
WEST ISLES FEASIBILITY STUDY
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